

ABSTRACT

A microwave oscillator for inducing parallel feedback from collector to base and obtaining a stabilized oscillation output is realized by connecting MSL A with released end to a base terminal of a transistor, connecting MSL B to its collector terminal, and disposing a DR closely to the MSL A and B to couple them electromagnetically. The length between the released end and the position of MSL A which is closest to the center of DR is set to $\lambda_g/4$ (λ_g is the guide wavelength in the MSL A), and HIL is merely connected to this position as a bias supply line to the base terminal. This structure does not require the choke circuits which occupied a relatively wide area on the conventional circuit board, and a small and stable microwave oscillator having excellent phase noise characteristics, and a low-noise converter for receiving satellite signal by using the same are realized.